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U.S. Veterans Experience Moral Injury Differently Based on Moral Foundations Preferences

Cover Page Footnote

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U.S. Veterans Experience Moral Injury Differently Based on Moral Foundations Preferences

Daniel Perez, Paul Larson, and John Bair

Abstract

This study is the first to examine the relationship between moral foundations preferences and the severity of moral injury symptoms reported by U.S. veterans. A total of 85 participants were recruited through social media pages for veterans, and participants completed an online survey assessing their severity and type of moral injury and their preferences for each of the five core moral foundations. Viewing moral injury through the lens of the moral foundations theory allows for an in-depth understanding of the cause and nature of moral injury. Overall, veterans' preferences for different groups of moral foundations had a significant relationship with the severity of the subtypes of moral injury they experienced. Veterans who have experienced a potentially morally injurious event (pMIE) and are suffering from moral injury as a result are likely not receiving adequate treatment, as moral injury is often masked and presents as alternative diagnoses (PTSD, depression, etc.). Assessing veterans' moral foundations preferences in addition to determining the severity of their self- and other-directed moral injury will allow for more effective treatments to be developed and implemented.

Moral injury is a fairly new concept that has arisen in recent years from research into post-traumatic stress disorder (PTSD) and trauma among U.S. veterans. The particular manner in which moral injury affects individuals differentiates it from previous understandings of trauma and symptomatology associated with traumatic experiences. Distinguishing indicators of moral injury from symptoms of PTSD in veterans is a difficult task, but it may ultimately determine the effectiveness and outcome of therapeutic interventions. There are currently two "gold standard" evidence-based practices (EBPs) implemented at the U.S. Department of Veterans Affairs (VA) to treat PTSD in veterans: cognitive processing therapy (CPT) and prolonged exposure (PE) therapy (Foa et al., 2013; Resick et al., 2012). While both treatments have been proven to significantly reduce PTSD symptoms in veterans who complete either program, both also have high dropout rates (Hoge et al., 2014). Research also indicated that veterans do not perceive these EBPs as sufficient to address moral injury (Borges et al., 2019).

In order to develop more effective interventions that focus on treating moral injury specifically, it is important to first gain an understanding of how individuals' moral foundation may dictate how they interpret a pMIE. *Morality* is a concept that is often thought of in dichotomous terms (right vs. wrong or

good vs. evil), and it often takes on a spiritual or religious quality (Haidt, 2012). Conceptualizing individuals through this rudimentary lens of morality not only hinders a clinician's ability to fully comprehend the subjective nature of moral injury symptoms but also negates the aspects of foundational moral systems that are crucial in understanding morality as a whole. (Graham et al., 2013). Viewing morality as an adaptable, pluralistic framework rather than as a rigid binary allows for a more comprehensive and holistic understanding of adverse symptoms of moral injury and creates space for the development of treatment interventions for these complex issues.

Moral Injury

Developing an understanding of moral injury can be challenging, as many of its features are abstract which makes it difficult for many individuals to describe. The primary cause of moral injury is believed to be exposure to a transgressive act or acts or to pMIEs. Moral injury is not the event itself, nor is it the negative emotions that occur immediately after experiencing a pMIE. Moral injury is better explained as the result of ineffective attempts to manage adverse emotions, or moral pain, that have developed over time as a direct result of one's experience of a pMIE. *Moral pain* refers to the natural emotions that an individual commonly experience after their values have been transgressed, and these emotions

alone are nonpathological. It is the intense, often untreated, moral pain that continuously disrupts an individual's life that ultimately creates moral injury. There is currently no universal consensus or explicit definition that captures moral injury, but two main definitions are used in outlining what constitutes an event that leads to moral injury.

The first definition by Litz et al. (2009) outlines a morally injurious event as one that involves "perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations" (p. 700). This definition serves as a general inclusion condition in that this standard must be met in order for there to be moral injury, much like the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* Criterion A for the diagnosis of PTSD. There is currently no *DSM* diagnosis for moral injury. Therefore, language such as Litz et al.'s definition can be extremely helpful to clinicians as they clarify and rule out diagnoses for veteran patients by differentiating nonoverlapping moral injury symptoms from PTSD symptoms.

The second definition takes a more dynamic approach to understanding pMIEs and asserts that the transgressive act or acts must involve "(a) a betrayal of 'what's right'; (b) by someone who holds legitimate authority; (c) in a high stakes situation" (Shay, 2014, p. 183). This description differs from the definition proposed by Litz and colleagues as it requires a violation of one's moral beliefs by an individual who holds a position of authority and hinges on a determination of "what's right." It is important to understand that the term "right" is inherently subjective, as what is right for one person may be wrong for another. The differences in these two definitions are subtle but will help to explain differences in subtypes of moral injury and how moral injury can develop in some individuals but not others.

Building on these two core definitions of moral injury, Jinkerson (2016) offered a more encompassing, conceptual definition of moral injury from a syndrome perspective. His work built upon previous research into moral injury by establishing more concrete criteria and symptoms caused by moral injury and listed both "core" and "secondary symptomatic features" (p. 126). Work of this nature will ultimately advance the understanding of moral injury and provide empirical evidence should moral injury become an official diagnosis in the future. In addition to defining moral injury in a broad sense, recent research has found evidence of moral injury

subtypes, differentiating symptoms that are internalized or directed at the self (guilt, shame, and depression) from symptoms that are externalized or directed at others (anger, distrust, and lack of connection with others; Currier et al., 2018).

Acts that constitute a violation of one's deeply held moral beliefs, regardless of which definition is used, will undoubtedly have a profound impact on an individual's moral foundation. These violations often cause intense feelings of shame and guilt in those who have been affected (Nash & Litz, 2013; Shay, 1991). The damage caused by pMIEs has been shown to contribute not only to the development of PTSD symptoms in veterans but also to long-term emotional, spiritual, psychological, behavioral, and social difficulties (Yan, 2016). According to Jinkerson and Battles (2019), exposure to pMIEs "statistically predicted guilt (five of six measures), meaning in life (negative relationship), depressive symptoms, anxiety symptoms, reexperiencing, and avoidance" (p. 37).

In addition to these symptoms, other symptoms have been associated with moral injury, including a loss of trust in oneself, others, or one's chosen deity; feelings of betrayal; and self-deprecation (Bryan et al., 2014; Bryan et al., 2016; Currier, McCormick, et al., 2015; Jinkerson, 2016; Shay, 1994, 2014). The extent and complexity of the symptoms that may result from experiencing a pMIE demonstrate that a complex understanding of morality is needed to comprehend the nature and dynamics of moral injury.

Moral Foundations Theory

The moral foundations theory was initially developed to define differences in moral values systems across cultures and was later used to assess such differences among U.S. individuals with disparate political preferences (Graham et al., 2009). One of the theory's major premises proposes that people make moral judgments using a continuum of moral intuitions rather than one or two foundational values. The authors of the moral foundations theory proposed a nonexhaustive list of five core moral foundations: Care/Harm, Fairness/Cheating, Loyalty/Betrayal, Authority/Subversion, and Sanctity/Degradation (Haidt, 2012, 2013; Haidt & Graham, 2007).

Researchers discovered a divergence within the core foundations while measuring the moral domain in terms of self-reported political ideology, which they termed the individualizing-binding distinction. Researchers hypothesized that the "individualizing" foundations (Care and Fairness)

place the individual as the locus of morality, whereas the “binding foundations” (Loyalty, Authority, and Sanctity) place society, family, and one’s relationship with God as the locus of morality.

The Care foundation emphasizes protection of vulnerable individuals, particularly children, and underlies the virtues of gentleness and nurturance. The Fairness foundation stresses the importance of equality, rights, and justice, and it also underlies the value of proportionality (Graham et al., 2011; Graham et al., 2009).

The binding foundations place more importance on duty, sacrifice for the good of the community, and purity. The Loyalty foundation emphasizes the virtues of patriotism and group responsibility and is related to humans’ historical inclination to form changing coalitions. The Authority foundation underlies ideals of leadership, followership, and respect for legitimate authority figures. The ethics of divinity are a major tenet of the Sanctity foundation, as are principles related to religion, cleanliness, and suppressing humanity’s carnal desires of greed, hunger, and lust (Graham et al., 2013). When making moral judgments, individuals give each of these foundations more or less importance, and their relative weights are influenced by biological processes, childhood experiences, parental and caregiver relationships, and cultural and societal norms (Haidt, 2012).

Examining moral injury through the lens of the moral foundations theory will provide clinicians with a more advanced understanding of the cause and extent of moral injury and will inform the most appropriate avenue of treatment for each affected individual. An individual’s preference for one moral foundation over another may serve as a protective factor in the development of moral injury, while, conversely, holding on too tightly to one’s moral foundation may serve as a risk factor.

Method

Participants and Procedures

Participants for this study were a sample of veterans who had served in any military branch on active duty at some point during the years 2001–2014. Having never deployed to a combat theater was not an exclusion criterion, as transgressions to one’s moral belief system need not occur solely in combat. Participants were recruited throughout the summer of 2018 using convenience sampling from online groups for veterans, including Facebook and LinkedIn groups

and groups organized by Iraq and Afghanistan Veterans of America (IAVA) and Division 19 of the American Psychological Association (APA). Participants each completed an online survey and submitted a total of 116 responses. Of these 116 responses, 31 were discarded due to incompleteness, resulting in a total sample size of 85 participants. For detailed demographic information on the participants, see Table 1.

This study was exploratory in nature and was designed to determine if the severity of moral injury reported by U.S. veterans is correlated with a preference for any of the five core moral foundations. The study procedures and documents were approved by the institutional review board of the Chicago School of Professional Psychology and complied with APA’s ethical standards for the treatment of human subjects. Informed consent was obtained from each of the participants prior to initiation of the online survey.

Measures

Moral Foundations Questionnaire (MFQ)

The MFQ was designed to quantify the degree to which respondents prefer each of the five core moral foundations. It was initially used to measure differences in moral foundations preferences along lines of self-reported political ideology. Results indicated that political liberals significantly preferred the two individualizing foundations (Care and Fairness) over the three binding foundations (Loyalty, Authority, and Sanctity). Political conservatives, on the other hand, generally preferred each of the five foundations proportionately (Graham et al., 2009; Graham et al., 2012). The survey has since become a universally reliable measure of moral foundations preferences across a wide variety of variables beyond political ideology.

The MFQ is a 32-question self-report measure designed to determine respondents’ levels of preference for each of the five core moral foundations (Graham et al., 2011). The first 16 responses measure moral relevance by presenting participants with scenarios and asking them to rate how relevant each scenario is to them when deciding right from wrong on a 0–5 Likert scale, where 0 = *Not At All Relevant* and 5 = *Extremely Relevant*. The second part of the survey consists of 16 statements that measure moral judgments and asks participants to rate their level of agreement with each statement on a 0–5 Likert scale, with 0 = *Strongly Disagree* and 5 = *Strongly Agree*. Each of the five core moral foundations is measured by

six associated questions. To determine how closely related these five moral foundations are as a group, Cronbach's alpha was used as a measure of internal consistency. Cronbach's alphas for the six-item measures of each foundation are .68 (Care), .60 (Fairness), .75 (Loyalty), .66 (Authority), and .76 (Sanctity).

Expressions of Moral Injury

Scale–Military Version (EMIS-M)

The EMIS-M is a 17-statement self-report instrument that is designed to measure the overall and subtype levels of moral injury symptoms endorsed by participants (Currier et al., 2018). For each of the 17 statements, respondents are asked to rate their level of agreement on a 1–5 Likert scale, with 1 = *Strongly Disagree* and 5 = *Strongly Agree*. The sum of the measure produces an overall score ranging from 17–85. In addition to producing this score, the instrument further examines two subtypes of moral injury: self-directed moral injury (SDMI) and other-directed moral injury (ODMI). Nine of the 17 statements inquire about SDMI and eight statements address ODMI, and when totaled, they produce scores ranging from 9–45 and 8–40, respectively. For the purpose of this study, only the scores of the subset moral injury scales were calculated, and the overall score was not used. Cronbach's alphas for the items that measure SDMI and ODMI are .94 and .91, respectively.

Data Analysis

From the MFQ results, sums of the sets of questions pertaining to each of the moral foundations were calculated to produce scores between 0–30, with 0 signifying no preference for the foundation and 30 indicating extreme preference for the foundation. These scores were rank ordered to display preference, with the highest number being the most salient foundation. The sums for each foundation were then categorized into one of three distinct groups illustrating the participant's level of preference, as follows: 0–10 = Low, 11–20 = Moderate, and 21–30 = High.

Table 1. Participant Demographic Characteristics

Variable	Frequency	%
Total number of participants	85	100
Age		
40+	39	45.9
35–39	23	27.1
30–34	17	20.0
25–29	6	7.1
Gender		
Male	58	68.2
Female	27	31.8
Ethnicity		
White	67	78.8
African American	4	4.7
Hispanic/Latinx	6	7.1
Prefer not to answer	2	2.4
Other	6	7.1
Political ideology		
Liberal	16	18.8
Moderate	23	27.1
Conservative	31	36.5
Prefer not to answer	13	15.3
Other	2	2.4
Branch of service		
Army	54	63.5
Marines	7	8.2
Navy	9	10.6
Air Force	13	15.3
Coast Guard	2	2.4
Campaign deployed		
OIF	25	29.4
OEF	18	21.2
Both	27	31.8
Neither	15	17.6

Note. OIF = Operation Iraqi Freedom;
OEF = Operation Enduring Freedom

The sums of the SDMI and ODMI scores obtained from the EMIS-M were calculated for each of the three groups, producing scores ranging from 9–45 (SDMI) and 8–40 (ODMI). These scores were then placed into groups based on the participants' level of preference for each foundation. From each group, means were obtained and analyzed using Pearson's correlation coefficient. This process was completed five times for each participant, once for each of the five foundations. See Table 2 for detailed results.

Results

Table 2 illustrates the means, standard deviations, Pearson correlation matrix, and Cronbach's alphas for each of the variables used in this study. The results indicate a strong positive relationship between the outcome variables measuring SDMI and ODMI, $r = .65$, $p < .001$. There is also evidence of strong positive correlations within predictor variables measuring individualizing foundations (Care and Fairness, $r = .66$, $p < .001$) and variables measuring binding foundations (Loyalty and Authority, $r = .66$, $p < .001$; Loyalty and Sanctity, $r = .61$, $p < .001$; and Authority and Sanctity, $r = .58$, $p < .001$). Only one foundation was significantly correlated with a outcome variable in the preliminary examination (Loyalty and SDMI, $r = .22$, $p = .04$.05), while the relationship between Care and SDMI was marginally significant ($r = .21$, $p = .06$).

Given the strength of correlations within the individualizing foundations and binding foundations, new variables were produced in order to minimize the potential of error due to multicollinearity. Rather than examining each moral foundation individually, a multiple regression analysis was used to evaluate variance in both SDMI and ODMI in terms of individualizing and binding foundation preferences. The results indicate that individualizing and binding foundations explain

a marginally significant amount of the variance in the reported severity of SDMI ($F(2, 82) = 2.71$, $p = .07$, $R^2 = .06$, $R^2_{Adjusted} = .04$). The results also indicate that individualizing and binding foundations preferences were not statistically significant predictors of variance in the reported severity of ODMI ($F(2, 82) = .86$, $p = .43$).

Figure 1 is a visual representation of how respondents reported severity of SDMI in terms of preference given to both the individualizing and binding moral foundations. This chart shows that individuals who endorsed moderate to high preference for the individualizing foundations reported higher amounts of SDMI than those who reported less preference for the individualizing foundations. There is also evidence that as individuals report higher preferences for binding foundations, they will also report more severe SDMI. Figure 2 shows that individuals who endorsed moderate to high preferences for both the individualizing and binding foundations will report more severe ODMI than individuals who reported low preferences for both groups of foundations.

Discussion

The results of this study yielded several notable findings. First, these findings show that there is a meaningful relationship between the amount of preference an individual gives to specific

Table 2. Means, Standard Deviations, and Pearson Correlation Matrix for All Variables (N = 85)

	SDMI	ODMI	Care	Fairness	Loyalty	Authority	Sanctity
SDMI	(.94)						
ODMI	.65**	(.91)					
Care	.21	.14	(.68)				
Fairness	.09	.12	.66**	(.60)			
Loyalty	.22*	.02	.14	.03	(.75)		
Authority	.15	.10	-.08	-.03	.66**	(.66)	
Sanctity	.12	-.02	.03	.01	.61**	.58**	(.74)
Mean	19.48	22.39	19.85	20.66	18.47	18.84	15.5
Standard Deviation	9.72	8.50	4.81	4.14	5.37	4.93	6.04
Note. SDMI = self-directed moral injury; ODMI = other-directed moral injury. **Correlation is significant at the .001 level (2-tailed) *Correlation is significant at the .05 level (2-tailed). Cronbach's alphas are shown in the diagonal.							

moral foundations and the severity of moral injury symptoms that they endorse. Specifically, distinguishing whether a veteran identifies more closely with either binding or individualizing moral foundations can explain how they interpret a pMIE. Veterans who demonstrate a high preference for either individualizing or binding foundations would likely benefit from treatment that differs from treatment given to individuals who endorse low preferences in either group of moral foundations. Examining preference given to each moral foundation and comparing those results with a veteran's moral injury symptoms can provide insight into the nature of the perceived transgression and can ultimately help to indicate the best course of treatment for the specific individual.

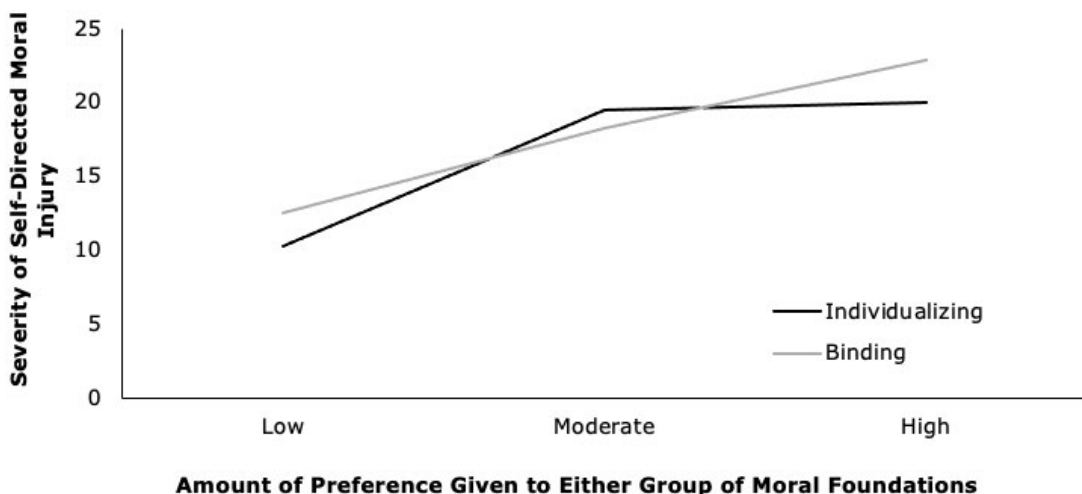
Although examining each individual's moral foundation preferences is a crucial step in the treatment of moral injury, this study also illustrates the importance of evaluating patients' symptoms in terms of moral injury subtypes. Veterans who identify with individualizing foundations over binding foundations may be prone to endorse higher SDMI than ODMI, while those who prefer binding foundations to individualizing foundations may endorse higher ODMI than SDMI. From a practical perspective, it makes sense that an individual who is more concerned with aspects of equality, nurturance, and caring for those unable to care for themselves would interpret a pMIE much differently than would an individual who differentiates right from wrong based on respect for authority, a sense of group responsibility, and purity.

Internalized moral injury is likely to arise after an individual has witnessed, failed to prevent, or even perpetrated acts that violate their moral foundation, and it is often manifested in symptoms such as shame, guilt, remorse, and depression.. These symptoms are closely associated with individualizing foundations, as they place more emphasis on the individual as the locus of morality. When someone else (whether it be peers, superiors, society, or deity) violates an individual's binding foundations the transgression is externalized, which often results in anger. This violation can be perpetrated by peers, superiors, society, or even one's deity. When an individual's moral foundations are violated, understanding which foundations were violated, how they were violated, and how the patient has manifested symptoms will allow clinicians to develop and implement more effective treatments.

Clinical Implications

Recent studies have illustrated the need for new treatment interventions to specifically address moral injury. They have also illuminated the ways in which current EBPs used to treat trauma-related symptoms in veterans are ineffective in treating moral injury: Clinicians do not discuss moral injury during treatment, often have poor rapport with the veterans they serve, and implement therapeutic interventions too rigidly (Hoge et al., 2014). Additional studies highlight the need to treat moral injury using a more functional, adaptable approach that allows for changes in agenda. Farnsworth et al. (2017) demonstrated the positive aspects of treating moral injury with acceptance

Figure 1. Self-Directed Moral Injury Severity as a Function of Preference Given to Individualizing and Binding Moral Foundations



and commitment therapy (ACT) as an alternative to the “gold standard” EBPs for treating PTSD. Farnsworth et al. stated that while traditional EBPs designed to treat PTSD focus on trauma symptom reduction, ACT invites the experiencing of guilt, shame, disgust, and so on, “allowing their presence to inform those suffering from moral injury, evaluating themselves as inhuman, that they are human and the pain of their experience is a reminder of their intact, but unlived, values” (p. 396). Treating moral injury with more holistic and encompassing approaches, such as ACT, will most likely decrease dropout rates and increase veterans’ quality of life.

In addition to creating more functional and adaptive therapeutic interventions for the treatment of moral injury, understanding how patients’ moral foundations can influence the type and extent of their moral injury will help dictate appropriate courses of treatment. As stated earlier, religion and spirituality are often heavily emphasized in common conceptions of morality and moral injury; thus, some current treatment interventions stress spiritual- and faith-based aspects of forgiveness, repentance, and atonement. One such intervention, spiritually-integrated cognitive processing therapy, was created by adapting the current CPT protocol to emphasize religious/spiritual aspects of the patient (Pearce et al., 2018). While this approach may benefit a small sample of veterans, this form of therapy is likely to be counterproductive in the treatment of moral injury not only because CPT has been shown

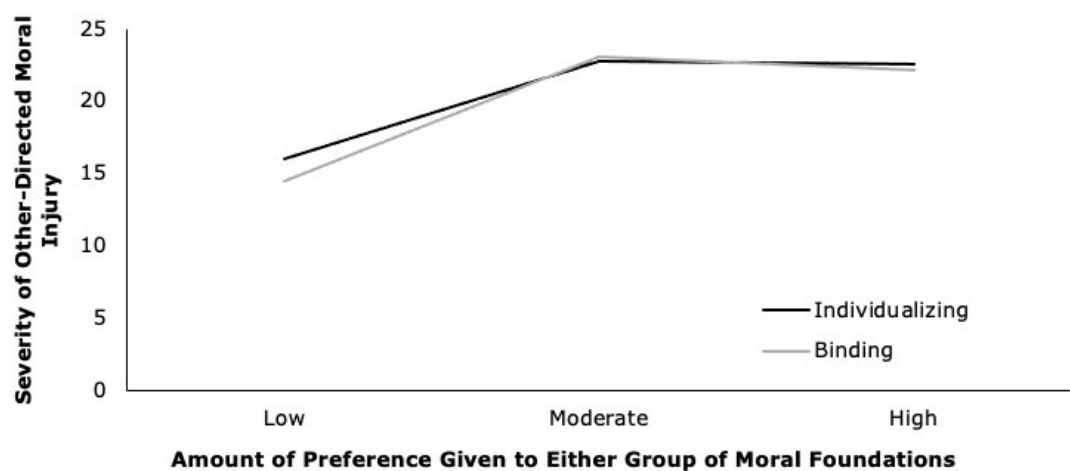
to insufficiently address moral injury but also because veterans do not place as high of a preference on religion/spirituality as was previously hypothesized.

In this sample, veterans overwhelmingly exhibited the least preference for the Sanctity scale, which is highly influenced by religion. Furthermore, Question 16 on the MFQ asked participants to what extent they believe “whether or not someone acted in a way that God would approve of” is relevant when determining right from wrong. In this study’s sample of veterans, the mean was 1.95 on a 1–5 Likert scale, indicating *Not Very Relevant–Slight Relevance*, and was the least preferred statement overall when deciding moral relevance. These findings suggest that emphasizing religion and spirituality may not be as important as was previously believed, particularly among younger veterans, and that addressing the other four core foundations will likely produce more active engagement in therapy.

Limitations

There were several limitations in the present study. First, the study’s sample size ($N = 85$) may not allow for the results to be generalized to the entire veteran population and may not fully encompass the experiences and attitudes of all veterans. Future studies would be wise to investigate the changes that occur to veterans’ moral foundations after exposure to pMIEs, provided a larger sample size is obtained. The use of additional measures, including those that assess for moral injury exposure, would provide detail that cannot be obtained using only

Figure 2. Other-Directed Moral Injury Severity as a Function of Preference Given to Individualizing and Binding Moral Foundations



the EMIS-M. Measures such as the Moral Injury Questionnaire–Military Version (MIQ-M) and the Moral Injury Events Scale (MIES) are examples of reliable and valid measures that may be used to evaluate moral injury in veterans and should be incorporated into future studies (Bryan et al., 2016; Currier, Holland, et al., 2015).

While examining the data for additional results, another limitation was discovered. Question 28 on the MFQ, which asks respondents to evaluate the statement “It can never be right to kill a human being,” is one of the most essential items in determining moral judgment preference for the Care foundation. The original MFQ study found the mean score for this item among the general population to be 2.50, midway between *Slightly Disagree* and *Slightly Agree*. The mean for Question 28 in this sample of veterans was significantly lower ($M = 1.27$), indicating that participants universally disagreed with this statement. Given the nature and purpose of the military, this is to be expected; however, it indicates that the MFQ may not be an entirely valid instrument for determining moral foundations preferences among this population. The development of a military version of the assessment may be necessary.

Directions for Future Research

Current research into moral injury has allowed for the development of several measures and treatment interventions that specifically address symptoms of moral injury. This study is the first to incorporate the concept of moral injury with the moral foundations theory in an attempt to discover previously unknown or misunderstood implications of how moral foundations preferences can influence one’s development of moral injury. Future research should utilize these findings alongside other measures of moral injury and moral foundations to more specifically address concerns specific to the veteran population. The development of a military version of the MFQ to measure moral foundations preferences in active-duty servicemen and women and veterans may allow for a more specific understanding of the effects one’s moral foundation development may have on the development of moral injury.

Conclusions

The findings of this study are meant to elicit discussion of new, alternative interventions for the treatment of moral injury in U.S. veterans. The study was also designed to provide insight to

clinicians who work with veterans suffering from moral injury. It provides empirical support for a better understanding of why the current emphases on EBPs and religious aspects of treatment are often ineffectual, and it suggests that a more holistic, functional view of morality may be needed in order to fully encompass the complexity of moral injury. The study also offers insights into the use of conceptual models informed by moral foundations theory; these models may be helpful in creating treatment modalities for moral injury that address each of the five core moral foundations. These treatments can be adapted to meet the needs of individual patients based on their endorsements of particular moral foundations and the severity of their individual experiences of SDMI and/or ODMI.

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